[proliferating] non-quiescent somatic cell or a nucleus isolated from said [proliferating] non-quiescent somatic cell.

19
~~87.~~ An improved method of cloning a non-human mammal by nuclear transfer comprising the introduction of a non-human mammalian donor cell or a non-human mammalian donor cell nucleus into a non-human mammalian enucleated oocyte of the same species as the donor cell or donor cell nucleus to form a nuclear transfer (NT) unit, implantation of the NT unit into the uterus of a surrogate mother of said species, and permitting the NT unit to develop into the cloned mammal, wherein the improvement comprises using as the donor cell or donor cell nucleus a [proliferating] non-quiescent somatic cell or a nucleus isolated from said [proliferating] non-quiescent somatic cell, and wherein the donor cell or donor cell nucleus has been genetically transformed to comprise at least one addition, substitution or deletion of a nucleic acid sequence.

20
~~88.~~ A method of cloning a non-human mammal by nuclear transfer comprising the following steps:

(i) inserting a desired non-human mammalian [proliferating] non-quiescent somatic cell or a nucleus isolated from said [proliferating] non-quiescent somatic cell, into a non-human mammalian enucleated oocyte of the same species under conditions suitable for the formation of the nuclear transfer (NT) unit;

(ii) activating the resultant nuclear transfer unit;

(iii) culturing said activated NT unit until greater than the 2-cell developmental stage; and

(iv) transferring said cultured NT unit to a host non-human mammal of the same species such that the NT unit develops into a non-human mammal.

21 ~~89~~. An improved method of cloning a non-human mammalian fetus by nuclear transfer comprising the introduction of a non-human mammalian donor cell or a non-human mammalian donor cell nucleus into a non-human mammalian enucleated oocyte of the same species as the donor cell or donor cell nucleus to form a nuclear transfer (NT) unit, implantation of the NT unit into the uterus of a surrogate mother of the same species, and permitting the NT unit to develop into the mammalian fetus, wherein the improvement comprises using as the donor cell or donor cell nucleus a [proliferating] non-quiescent somatic cell or a nucleus isolated from said somatic cell.

22 ~~90~~. An improved method of cloning a non-human mammalian fetus by nuclear transfer comprising the introduction of a non-human mammalian donor cell or a non-human mammalian donor cell nucleus into a non-human mammalian enucleated oocyte of the same species as the donor cell or donor cell nucleus to form a nuclear transfer (NT) unit, implantation of the NT unit into the uterus of a surrogate mother of the same species, and permitting the NT unit to develop into the mammalian fetus, wherein the improvement comprises using as the donor cell or donor cell nucleus a [proliferating] non-quiescent somatic cell, or a nucleus isolated from said proliferating somatic cell, and wherein the donor cell or donor cell nucleus has been genetically

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modified to comprise at least one addition, substitution or deletion of a nucleic acid sequence.

23
~~91~~. A method of cloning a non-human mammalian fetus by nuclear transfer comprising the following steps:

(i) inserting a desired non-human mammalian [proliferating] non-quiescent somatic cell, or a nucleus isolated from said [proliferating] non-quiescent somatic cell, into a non-human mammalian enucleated oocyte of the same species under conditions suitable for the formation of a nuclear transfer (NT) unit;

(ii) activating the resultant nuclear transfer unit;

(iii) culturing said activated NT unit until greater than the 2-cell developmental stage; and

(iv) transferring said cultured NT unit to a host non-human mammal of the same species such that the NT develops into a fetus.

C Please cancel Claim 109 without prejudice.